

LISTING OF CLAIMS

The following Listing of Claims replaces all prior versions in the application:

Claims 1 – 13 (canceled)

14. (Currently amended) A method for making microcomponents exhibiting microreliefs having a mirror-polished surface roughness of an optical quality from a substrate having a thickness, comprising:

making a microrelief having said mirror-polished surface roughness of an optical quality for each microcomponent by mechanical machining of the substrate, the mechanical machining comprising moving at least one tool translationally and parallel to the substrate at a predetermined depth in the thickness of the substrate, the mechanical machining being not carried out through the thickness of the substrate; and

cutting out the substrate into bits such that the individual microcomponents or groups of microcomponents are separated from each other.

15. (Previously presented) A method according to Claim 14, wherein the first mechanical machining step comprises at least two substeps: a first substep for blank-forming and a second substep for finishing.

16. (Currently amended) A method according to Claim 14, wherein making a microrelief is performed to an extent of obtaining said mirror-polished surface roughness optical quality of the microrelief.

17. (Previously presented) A method according to Claim 14, wherein the microrelief is made with a single tool moved at the surface of the substrate.

18. (Previously presented) A method according to Claim 14, wherein the microrelief is made by several tools working simultaneously and/or in succession.

19. (Previously presented) A method according to Claim 14, wherein the microrelief is made with a saw moved along one direction at a time.

20. (Previously presented) A method according to Claim 14, wherein the microcomponents are microprisms.

21. (Previously presented) A method according to Claim 20, wherein the microprisms are made by a "V" profile abrasive blade.

22. (Previously presented) A method according to Claim 19, the saw having a blade with plane and parallel faces, or having at least an inclined face.

23. (Previously presented) A method according to Claim 14, wherein making a microrelief consists of passing a blade having a die which does not have abrasive grit therein, said blade being used as a carrier for a separate polishing abrasive distributed in the microreliefs.

24. (Previously presented) A method according to Claim 14, wherein making a microrelief further comprises performing surface chemical etching of the substrate.

25. (Previously presented) A method according to Claim 14, wherein making a microrelief further comprises forming a planarizing coating on the substrate.

26. (Previously presented) A method according to Claim 14, wherein making a microrelief comprises using a “U” shaped blade having side portions comprising first abrasive grits and an end portion comprising second abrasive grits, the second abrasive grits being of a larger particle size than the first abrasive grits.

27. (Currently amended) A method for making microcomponents exhibiting microreliefs having a mirror-polished surfaces roughness of an optical quality in a substrate having a thickness, comprising:

making a microrelief having said mirror-polished surface roughness of optical quality for each microcomponent by mechanical machining of the substrate, the mechanical machining comprising moving at least one tool translationally and parallel to the substrate, the vertical dimension of the microrelief being in the range between 10 microns to 600 microns; and

cutting out the substrate into bits such that the individual microcomponents or groups of microcomponents are separated from each other.

28. (Currently amended) A method of making a microcomponent in a substrate of a material having a certain thickness, the method comprising:

mechanically machining, by moving at least one tool translationally relative to the material, a microcomponent in the substrate;

producing, as a result of the mechanically machining, a surface having a mirror-polished surface roughness ~~an optical quality surface~~ on a microrelief scale in the substrate; and

~~Cutting~~ cutting out the substrates in order to obtain the microcomponent.

Claims 29 – 30 (Cancelled)

31. (New) A method for making microcomponents according to claim 14, wherein the microreliefs have a roughness of about 1 to about 100nm RMS.

32. (New) A method for making microcomponents according to claim 27, wherein the microreliefs have a roughness of about 1 to about 100nm RMS.

33. (New) A method for making microcomponents according to claim 28, wherein the microreliefs have a roughness of about 1 to about 100nm RMS.